PPAS FOR MINES: Q&A WITH MAINSTREAM RENEWABLE POWER

By Elizabeth Judd, Energy and Mines

Editor's note: In this interview, Chris Matthews, New Business Manager for Mainstream Renewable Power, discusses the specifics of wind and solar in Africa and explains the requirements for his company to act as an IPP for mines. Mainstream Renewable Power is a main sponsor at the upcoming Renewables and Mining Summit on June 23-24 in Johannesburg and Matthews will be chairing the opening discussion with mining energy leaders on how they are assessing options for renewables.

CHRIS MATTHEWS - NEW BUS. MGR., MAINSTREAM RENEWABLE POWER

Energy and Mines: How do you see the opportunities for renewable energy projects in the African mining sector evolving?

Chris Matthews: The African mining industry is calling for reliable and cost effective electricity supply. By integrating renewable energy projects with diesel generation or grid supply, Mainstream Renewable Power provides a solution that reduces the overall cost of electricity in most markets, is a guaranteed source of electricity to the mine, and at a price which will not change, since the fuel is free. We also use practically no water for generation.

These attributes make wind and solar PV a compelling option for a mine, and we are seeing a lot of interest as a result. Due to the speed at which we can build a project and start supplying the mine, as little as a year in the case of some solar PV projects, mines are increasingly interested in talking with us and I expect you will see some utility scale deals between renewable generators and mines over the next year.

E&M: For the mining sector in Africa, where do you see the greatest opportunity-- wind or solar?

CM: It depends on the precise situation - there are benefits with wind or solar technologies. We analyze which is the best option for the mine based on various factors including: required energy supply [solar is easier to work at small scale], location of the mine, timeframe constraints (takes approx. 2.5 years – 3 years to develop a wind project as opposed to one year for solar) and the locally available resource. Wind is usually cheaper than solar PV - however through constantly evolving technology development, the cost is continuing to fall.

E&M: Is there greater opportunity in utility or small scale projects?

CM: Sometimes it's harder to make a bold economic case for projects under 5 megawatts. For example, a lot of the technology we'd use in a large project to integrate solar generation into a diesel grid on a remote location becomes cost ineffective below 5 megawatts. We're focusing on mines with a consumption between 10-25 megawatts, but there's no upper limit. The bigger, the better.

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E&M: What are some of the recent projects by Mainstream that have similar attributes to projects for a mining client?

CM: IKEA bought wind power from us in Ireland (11MW) and in Canada (46MW). The motives that led them to go down this path are very similar to that which might convince a mine: stability of supply and reliability of price. They haven't made this decision just because they think it's the environmentally friendly thing to do. They've done it because it affects their bottom line.

E&M: What type of timelines for implementation should a mine expect for a wind farm and a solar farm?

CM: It boils down to how long it takes to gather enough data to get a bankable project together. For solar, that's usually a year and for wind it's two and a half to three years. This could all be short circuited if there is wind data already available. For example, we're looking at projects in West Africa where we already have two years of wind data available and we can get financial close within a year on a wind project and be building shortly thereafter.

E&M: What types of projects are you in a position to finance and what do you need from a mine if you're to be the owner of the asset?

CM: If we can agree to a bankable PPA, we have a deal. To be "bankable," that PPA has to be for a reasonably long term, ideally 15 years. It has to be under an arrangement that when we generate, the mine will take what we're generating - there can't really be any non-acceptance of our product. That's why we spend so much time engineering the integration and connection to make sure that there is no disruption when our product comes on line.

Finally, the PPA must be deemed to be creditworthy by the lending institution. That isn't a problem for large mining companies, but may cause some difficulties with smaller mines. Nonetheless, there is a lot of interest among lending institutions to make these projects work and we believe that we can structure a financing solution for most opportunities we encounter.

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E&M: How do you see the market for renewables evolving among African mines in the next three-to-five years?

CM: Within the next couple of years, I think you'll start seeing mines doing projects that substitute 30% of their electricity consumption with renewables, drastically reducing the cost of electricity for them. They'll have to truck less diesel from remote places, and there are all sorts of benefits on the risk side that become clear over time.

Given Mainstream's experience in mining markets such as Chile and Canada, along with our innovative approach and proven track record, I expect that Mainstream will participate strongly in this new and exciting market.

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